

MATERIAL SAFETY DATA SHEET
CARBON DIOXIDE Fire Extinguisher

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 21667 Carbon Dioxide Fire Extinguisher

APPLICATIONS: Fire Extinguisher

SUPPLIER: Draper Tools Ltd
Hursley Road
Chandlers Ford
Eastleigh
Hampshire
SO53 1YF
Draper Helpline +44 (0) 2380 494344

SECTION 2 COMPOSITION AND INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS N°	% W/W	OSHA PEL Mg/m ³	ACGIH TLV Mg/m ³	TOXICITY DATA
Carbon Dioxide	124-38-9	N/A	N/A	N/A	N/A

These cylinders contain Carbon dioxide which functions as a fire suppression agent. When the cylinders discharge the agent will be released and may present hazards to exposed persons. See MSDS on Carbon dioxide for information and warnings. In addition, the cylinders are self-pressurized. Although unlikely to occur, a cylinder could be propelled and cause bodily injury and/or property damage if the valve is broken due to improper handling or storage. Also, if a cylinder is over-pressurized, exposed to direct heat, or receives severe physical impact it could discharge or rupture causing bodily injury and/or property damage.

SECTION 3 PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling point, °F:	(Sublimes) -109.3	Specific gravity (H₂O=1) @1 atm solid @ -11°F	1.56	Viscosity @ 20° C	N/A
Vapor pressure @ 68°F	831 PSIG	Percent volatile by volume	N/A	Melting point, °C	N/A
Vapor density (AIR=1) @ 68°F	1.53	Evaporation rate (Butylacetate=1)	N/A	Solubility in water	87.8% by volume
Reactivity in water	N/A	Appearance and odor: Colorless gas, slight pungent odor.			

SECTION 4 FIRE FIGHTING MEASURES

Flash point : N/A	Flammable limits in air, % by volume N/A	Auto-ignition temperature N/A
Extinguishing media:	Non-flammable gas, Carbon Dioxide is an extinguishing agent	
Unusual fire and explosion hazards:	N/A See sections 2 & 7	
Special fire fighting procedure	If cylinders are exposed to a fire, safely relocate or keep cool with water spray	

SECTION 5. ACCIDENTAL RELEASE MEASURES

Wear full protective clothing and self-contained breathing apparatus. Remove leaking cylinder to a safe place. Ventilate the area. Vapors can accumulate in low areas. Leaks inside confined spaces may cause suffocation as oxygen is displaced and should not be entered without a self-contained breathing apparatus.

SECTION 6 –STABILITY AND REACTIVITY DATA

Stability : Stable	Conditions to avoid: Direct heat & severe impact to pressurized cylinder	Hazardous Polymerization: Will not occur
Incompatibility (material to avoid)	If moisture is present, it may form carbonic acid	
Hazardous decomposition products:	None established	

SECTION 7 –TOXOLOGICAL INFORMATION

Acute Toxicity	Simple asphyxiant. LC _{Lo} (inhalation in humans): 90,000ppm/ 5 minutes.
Chronic Toxicity /Carcinogenicity	This product is not expected to cause long term adverse health effects.
Genotoxicity	This product is not expected to cause any mutagenic effects.
Reproductive/Developmental Toxicity	This product is not expected to cause adverse reproductive effects.

SECTION 8 –ECOLOGICAL INFORMATION

Mobility	Carbon dioxide occurs naturally in the atmosphere.
Persistence/Degradability	Carbon dioxide occurs naturally in the atmosphere.
Bio-accumulation	Carbon dioxide occurs naturally in the atmosphere.
Ecotoxicity	Aquatic Toxicity: 100-200 mg/l/no time specified/various organisms/fresh water Waterfowl toxicity: 5-8%, no effect

SECTION 9– HEALTH HAZARD IDENTIFICATION	
Threshold limit value:	N/A
Routes of entry:	Inhalation: Yes Skin contact: No Ingestion: Yes
Signs and symptoms of overexposure:	At 2 to 3% concentration symptoms of simple asphyxia occur; 3 to 5% causes increased respiration and headache; up to 15% causes headache, nausea, vomiting and unconsciousness. Higher concentrations cause rapid circulatory insufficiency leading to a coma & death. CO ₂ is the most powerful cerebral vasodilator known. Persons in ill health where such illness would be aggravated by exposure to gaseous carbon dioxide should not be allowed to work with or handle this product.
Chemical listed as carcinogen or potential:	NTP program : No IARC monographs : No OSHA : No

SECTION 10- FIRST AID MEASURES

If Inhaled: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. If unconscious, provide assisted respiration and supplement oxygen. Further treatment should be symptomatic and supportive. Self-contained breathing apparatus should be made available for rescue personnel.

In the event of physical injury, due to exposure of the compressed gas hazard, take appropriate first aid or medical measures.

Emergency and first aid procedures:

Eyes

Immediately flood the eye with plenty of warm water for at least 15 minutes, holding the eye open.

Obtain medical attention if soreness or redness persists.

Skin

Gently warm affected areas. Obtain medical attention if blistering occurs or redness persists.

Ingestion

Ingestion is not considered a potential route of exposure.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

Advice to Physicians

In case of frostbite, place the frostbitten part in warm water. If warm water is not available or impractical to use, wrap the affected parts gently in blankets.

DO NOT USE HOT WATER.

SECTION 11– HANDLING AND STORAGE INFORMATION	
Precaution to be taken in handling and storage.	Handle, transport and store carefully and securely to avoid accidental knocking over or other severe physical impacts. Do not expose to direct heat sources. Do not over pressurize.
Other precautions:	Cylinders should be recharged only by trained and qualified personnel.
Steps to be taken in case materials is released or spilled:	Contain any spill, place in closed container for proper disposal. Wash spill areas liberally with water to remove traces.
SECTION 12 – DISPOSAL CONSIDERATION	
Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. If spilled, contents will vaporize to the atmosphere.	

SECTION 13 – EXPOSURE CONTROL/PERSONAL PROTECTION INFORMATION	
Respiratory protection:	Positive pressure air line with mask or self-contained breathing apparatus.
Ventilation:	Use adequate ventilation, Use fan or vent to outside.
Protective gloves:	Rubber gloves recommended during spill/leak procedures and during recharging operations.
Eye protection:	Safety goggles or glasses & Chemical goggles recommended during spill/leak procedures and during recharging operations.
Other protective equipment:	Safety shoes are recommended when handling cylinders
Work/Hygienic practices:	Use good personal hygiene

SECTION 14 – OTHER REGULATORY INFORMATION
<p>EU Hazard Symbol and Indication of Danger. Non Flammable Gas</p> <p>R phrases None</p> <p>S phrases S9 Keep container in a well ventilated place.</p> <p>US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS</p> <p>TSCA Listing This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.</p> <p>EINECS Listing All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS) or are exempt from listing.</p> <p>DSL/NDSL (Canadian) Listing All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.</p>

WHMIS Classification

A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contain all the information required by these regulations.

MA Right To Know Law

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the minimum concentration include: - carbon dioxide

PA Right To Know Law

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - carbon dioxide

NJ Right To Know Law

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance

List: - carbon dioxide

California Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.

SARA Title III Sect. 311/312 Categorization

- Immediate (Acute) Health Hazard - Pressure Hazard

SARA Title III Sect. 313

This product does not contain a chemical which is listed in Section 313 at or above the minimum concentrations.

SECTION 15-TRANSPORT INFORMATION

DOT Shipping Name :Fire Extinguishers	DOT Hazards Class : 2.2
DOT ID Number : UN 1013	DOT Label : Non-Flammable gas

GENERAL KEYS:

N/A: Not applicable

NDA: No data available.

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